EBVV evaporator from MBE Komponenten

MBE Komponenten offers its EBVV-evaporator, on CF 4.5" (DN63) flange, with 5cm^3 hearth volume. It allows users to introduce real e-beam evaporation techniques into many epitaxial growth or deposition UHV systems originally designed with small flanges for radiation heated effusion cells only. EBVV can be installed into 4.5" (60mm ID) small effusion cell ports. Tilted ports can be used. Despite its small footprint, it includes a complete electromagnetic x- and y-dynamic beam deflection system and can deliver beam powers up to 3kW.

The 270° beam deflection design of the electron emitter avoids ion bombardment of the filament, due to the sharply bent e-beam path near the beam exit aperture. This ensures long filament lifetime and high purity deposition at high growth rate.

EBVV is suited for low vapour pressure materials, including refractory materials or dopants like boron and carbon. It can also be used for high k-material deposition. It is particularly well suited for Si and Ge MBE, including boron or carbon doping.

More than 75 Epitune II metrology systems shipped

Based on Luxtron Corporation's patented Ripple technology, more than 75 Epitune II in-situ metrology systems have now been shipped fitted to Aixtron MOCVD reactors.

As a standard feature on Aixtron's planetary reactors for GaN-based optical devices production, the metrology system provides process control of challenging processes, such as GaN-based blue lasers, LEDs and laser diodes. In addition to measuring the true surface temperature, this real-time monitoring tool also provides simultaneous reflectivity measurements for valuable in-situ film growth characteristics. Luxtron's Ripple technology offers temperature measurements over a range of 400°C to 1600°C, making it suitable for GaN, GaAs, InP and other III-V processes.

One-stop shop for fab consumables

Applied Materials Inc and Praxair Electronics, a division of Praxair Inc, have launched a joint initiative to provide a fab-wide Commodity Consumables Service (CCS) to semiconductor manufacturers worldwide.

To be marketed by Applied Materials, CCS is aimed at streamlining the efficiency and lowering the cost of customer fab operations. It offers a one-stop shopping service for a wide range of generic commodity consumables critical to the maintenance and operation of all wafer fabrication equipment.

Customers using CCS will be provided with supply chain management, planning, inventory consignment and point-of-use delivery for generic commodity consumable items, such as o-rings, seals, fasteners and filters.

David N.K. Wang, executive VP, Applied Global Services group, said: "This service goes beyond supporting Applied Materials' large installed base of equipment in fabs around the world and now includes commodity consumable parts for virtually all types of tools used in the fab. We are pleased to have Praxair Electronics, an accomplished logistics service provider, as a collaborator in this important customer service offering."

AlN programme extended

Crystal IS has received in excess of $750,000 from DARPA to fund a one-year extension to its programme focussing on ultra-low dislocation density native AlN substrates.

Leo Schowalter, Crystal IS' co-founder, president and CEO, said: "We are very pleased to receive DARPA's continuing support of our efforts to further improve the quality and availability of ultra-low dislocation density native AlN substrates, which have the potential to enable critical advances in multiple III-nitride device technologies of strategic national interest, including high-power RF transistors and high-efficiency ultraviolet emitters."

Jon Whitlock, CTO of Crystal IS, added: "Like Si, GaAs, InP, and SiC before it, native AlN will enable new semiconductor device developments of both military and commercial importance."

GaNzilla expands production

Shanghai Blue Light Technology Co Ltd has purchased a GaNzilla MOCVD system from Veeco Instruments Inc, for the production of high-brightness AlInGaN-based blue, cyan, and green LEDs.

James Dong, executive VP of SBLT, said: "The addition of the GaNzilla tool will substantially expand our production capacity for high performance GaN LED materials."